Notes from the 01/17/06 MI BPM Upgrade Meeting
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These notes can be found in Beams docDB #1526.

Agenda as announced:

Project Announcements
Combiner Board status
Transition Board
Transition Board I/O
Timing Board
Hardware Installation, cables
Front-end software
Online software
Validation
AOB

0. Project Announcements

- We will continue to pursue installation of the first house (House 44) during the week of January 23. Our current goal is to install on Tuesday, January 24 but we will have to communicate during this week and early next week to settle on a specific date and time. Dave Capista will be our contact in MI department, Marv will coordinate the actual installation and will be working closely with Manfred and others.

1. Combiner Board

- No opportunities to install recently. Approximately 75 remain to be installed and we will continue to look for opportunities to install boxes.

2. Transition Board: Manfred

- As concerns next week's installation we will need either 16 cables (that connect transition board to Echotek) or the crimp tool and connectors to build 16 cables ourselves. Bob Forster and Manfred will pursue and acquire the cables.

- All 8 channels on the first prototype board are tested and working with the exception of the internal test signal. Changes to the board are made to the files as they are implemented.

- The remaining 2 boards are being assembled. Should be finished Friday, will be tested Monday. If all goes well they will be ready for Tuesday installation.

- If all goes well the final drawings for the production assembly order will be ready within a few days. Then the production can go forward in procurement.

- The frame (6U) is ready and part of the backplane is ready. Also the power supply is available.

- The 53 MHz filters for the 2 prototype boards are not very well matched but will be good enough for the installation and testing.

3. Transition Board I/O

- Stefano gave a summary of current status and it can be found as a file in docDB 1526.

- Testing and progress has been good. Enough boards have been fabricated for testing and for installation in MI40. Testing with the timing board and the transition board is proceeding.

- Some work on the firmware is still to be done but is not needed for the functionality of the MI40 system. There was some question of default gain and other settings on the transition board on power-up or after reset.

4. Timing Board

- Bill gave a nice talk about the timing board and how SYNC and other signals are produced with the current system. His talk can be found as beams-doc-2104.

- In summary, the timing board has the functionality required for the MI BPM project. There are still details to work out to ensure that we can handle all types and lengths of cycles. In some cases we have to think about how to convert from time to number of buckets, among other things. But it looks like the system has the flexibility required to allow us to make all the measurements.

5. Hardware Installation, cables, etc.

- We discussed where in MI40 the crates will be located (probably in rack 119), how we will get the cables for house 44 (in rack 116) over to the transition boards using RG58, etc. We were encouraged by MI to remove the old system as soon as possible (a success oriented and optimistic attitude!) and we will discuss this as we move forward. Once this system is fully functional we will consider removing the old house

44 electronics and using the space for the new (though partially prototype) system.

6. Front-end software

- Steve showed slides that can be found in beams-doc-2103.

- First was shown all of the things that the front-end can current provide and it was an impressive list.

- Preparations have been made for connection to the online system via ACNET. All of the devices are available for house 44.

- Timestamps are being acquired via MDAT.

- There are still quite a few things to be done and progress on all of them are expected in the near future.

- Steve showed some timing studies for mode switching and for reading out the data. There are no show-stoppers at this time.

7. Online software

- The library changes needed for the new BPM data are finished. The database script needed to make the transition is ready.

- State (0) should work with the new House 44 electronics. I39 and I50 will work. It is not clear yet whether I42 (TBT) will work. Dave and others will check.

8. Validation

- Rob has placed new notes in docDB showing data from antiproton transfers from the Accumulator to the Recycler. There are a few unresolved issues concerning noise, resolution, etc. but in general it is a good start in studying the behavior of the system.

- There was a long discussion of what to measure during this coming week before the House 44 system goes in. Rob, Alberto and Manfred will discuss and decide what measurements are most important -- protons at 53 MHz, antiprotons during transfers, or anything else.

9. AOB

- No AOB, we ran out of time.